

**APPENDIX 5-20**

**Bond Estimate**

Genwal Bond EstimateSummary

Structural removal	\$ 139,130
Cut + Fill	75,480
Topsoil Distribution	24,750
Drainage Controls	40,500
Revegetation	10,710
Monitoring	112,500
Subtotal overhead (10%)	403,670
	<u>40,300</u>
Subtotal profit (10%)	443,370
	<u>44,340</u>
Subtotal Bond (1.5%)	487,710
	<u>7,290</u>
	495,000

Quantity Estimates for Removal of Structures

(1) West End of Disturbed Area =

Plate 3-1

Item No.

Description of Structure1  
+ 22Shop - 80' x 40' x 20'  
Shop expansion - 20' x 30' x 12'  
Steel / Metal Siding  
Conc. Foundation - 6" (SLAB)

21

Warehouse + Office Bldg. - 50' x 25'  
Steel / Metal Siding  
Conc. Foundation - 6" (SLAB)

3

Rockdust silo - 12' diam.  
Steel tank on metal stands 30' high

5

Power Center - 15' x 35'  $\Rightarrow$  Sub station  
8" concrete pad ; Transformers, etc.

Fence - 120' - chain link

6

Power Pole (6 total on site)

4

Concrete Dumpster Pad - 25' x 30'  
12" thickPaved Area - 17,430 ft<sup>2</sup>  
Asphalt, 3" Thick

(2) East End of Disturbed Area:

Plate 3-1

Item No.

Description of Structure

- |    |  |
|----|--|
| 7  | Underground bathhouse entrance<br>35'x40' concrete block structure with<br>metal roof. conc. pad 6"  |
| 8  | Intake portal . 20'x6' opening<br>4 total on site . Seal off.  |
| 20 | Visual Disconnect . Small elec. box .<br>4'x6' conc. pad 6" thick  |
| 18 | General Storage Facility . 35'x10'<br>Metal building , 8' tall .<br>Conc. pad 8" thick → 45'x30'   |
| 11 | Mine belt 25'x5'   |
| 10 | Crusher Pad , 30'x24'.<br>12" conc. w/rebar ;<br>8" x 8' concrete walls , Length = 78'<br>Metal decking 20'x20'<br>2 Crushers ; Metal Hopper   |
| 9  | Belt portal - included in item #8<br>above   |
| 2  | Fan Housing location - Doubled in<br>size since last estimate - Use Ken's<br>est. and double ⇒<br>$600 \times 2 = 1200 \text{ ft}^2$ 6" conc. foundation<br>$10,000 \times 2 = 20,000 \text{ ft}^3$ Structural Steel |
| 23 | Proposed Shotcrete - 7420 ft <sup>2</sup>  |

Plate 3-1  
Item No.

Description of Structure

- 15 Bulk Oil Station . 55' x 20'. Block + concrete . 10' tall, Metal Roof .  
6" conc. Floor  
8" conc. foundation  
Adjacent Concrete pad : 20' x 20' , 6" thick  
concrete wall : 28' x 6' x 8" thick
- 19 Hopper + Belt  
Structural Steel hopper, small crusher, + belt
- 13 Coal Silo . 450 ton capacity -  
75' high . 42" belts . Total  
Belt length = 200' STEEL, 30' of
- 16 Load Belt (included in item #13 above)
- 14 Weight Shed . 10' x 12'  
Conc. shed 8' high w/ conc. roof +  
conc. pad
- 17 Truck Pad . 80' x 14' concrete  
8" thick
- Fan Transformer; Elec Box 4' x 6' x 8'  
Conc. Pad 8" thick
- Chain Link Fence ; 4' high , Length = 120'
- Concrete guard rail ;  
 ① 3' high x 8" length = 530'  
 ② 10' high x 8" length = 250'
- Concrete Pad, North of Pond  
28' x 13' ; 6" thick

Plate 3-1

Item No.

Description of Structure

Retaining Wall ; 12" thick ; 8' tall  
length = 240'

## Culverts:

1)	42"	CMP (UD-1)	295 ft.
2)	24"	CMP (C-2, C-4, C-8)	275 ft.
3)	18"	CMP + PVC (C-1, UD-3)	495 ft.
4)	12"	CMP (C-5, C-6, C-7)	230 ft.

Drop inlets ; 3 total.  
Concrete , 5' deep  
4' x 4'

Concrete Inlets for 2 drainages  
See Appendix 7-7.  
UD-1 and UD-3 .

Sediment Pond Riser + culvert , 24" , 110' length

Gabion retaining wall @ Pond.  
20' max. height @ center. (Avg 5')  
Total length = 200'

Well abandonment - 6 wells total

Note: All non-combustible materials will be disposed of  
in the mine - All combustible materials will  
be hauled off site , haul distance = 20 miles  
one way.

### Cut + Fill Quantities

Based on attached cut / fill calculations,  
the total fill required is 6103 cubic yards.  
This material will be obtained from 2 sources =

- 1) Total Cut = 2530 yd<sup>3</sup>
- 2) Topsoil Stockpile = 3701 yd<sup>3</sup>

$$\text{Total Avail fill} = \underline{6231 \text{ yd}^3}$$

Therefore, there is sufficient material on site  
to complete grading operations.

The Bond cost estimate delineates between  
general excavation and hauling of "common  
earth", and loading, hauling + grading topsoil.  
The cost estimate is based on the following =>

earthwork costs	{	Cut (excavate)	Common earth - 2530 yd <sup>3</sup>
		fill	common earth - 2530 yd <sup>3</sup>
revg. costs	{	Topsoil load + haul	- 3701 yd <sup>3</sup>
		Topsoil grading	- 3701 yd <sup>3</sup>

Earthwork Cost EstimateSummary of Assumptions

- \* Equipment rates include operator
- \* Equipment + labor rates obtained from local sources
- \* Equipment operation time - based on timetable, subtracting delay time

① Rough Grading (2530 cu)

(rates do not include overhead + profit)

Equipment used

D-9 bulldozer w/ ripper	\$ 112.50 /hr
D-7 bulldozer	67.50 /hr
125 Track hoe (steep slopes)	25.00 /hr
Backhoe CASE 580	50.00 /hr
Compactor	67.50 /hr
Water Truck	270.50 /day
Pump (for water)	110.00 /day

Rate

5 weeks of full-time work to accomplish grading. Assume 3 operators w/ equipment full time.

1 Foreman	$\Rightarrow$	\$ 27.00 /hr	full-time
2 Laborers	$\Rightarrow$	\$ 15.00 /hr	full-time

② Distribute topsoil (3701 cu)EquipmentRate

CAT 936 loader w/ 10yd bucket	\$ 112.50 /hr
2 dump trucks	\$ 50.00 /hr each
D-7 Tractor to spread soil	67.50 /hr
24" disk for scarification	125.00 /day

2 weeks of full-time work to accomplish topsoil distribution. 3 operators w/ equipment full-time. 2 laborers + 1 foreman full time.

Assume 1-mile haul. 40 cu/hour per dump truck: 80 cu/hr total  $\Rightarrow$  46.3 hours  $\Rightarrow$  say 50 hours total to move topsoil.

(3) Soil testing

6 samples per topsoil stockpile ; 3 stockpiles.  
18 samples.

labor \$50<sup>00</sup>/hr /sample  
Lab analysis \$280<sup>00</sup>/sample

(4) Surveying

\$40.00/hr per survey team  
40 hours for survey.

(5) Riprap placement

Use Means Cost Data (1993) for riprap costs.

Riprap → Item 022-712-0350 \$16.68/ton  
adjust for Utah ⇒ .88(16.68) = \$14.67/ton

use \$15.00/ton in place

filter material → assume crushed stone

Item 022-308-1512 \$26.87/cy  
adjust for Utah ⇒ \$23.65/cy

convert to tons:  $(\frac{2000 \text{ lb}}{\text{ton}})(\frac{\text{ft}^3}{130 \text{ lb}})(\frac{\text{yd}^3}{27 \text{ ft}^3})$

$$= 0.57 \text{ yd}^3/\text{ton} (26.87/\text{yd}^3)$$
$$= \$15.31/\text{ton}$$

use \$15.00/ton in place

(6) Personnel carriers:

\$45.00/day + 30¢/mile per vehicle  
80 miles round trip } \$69<sup>00</sup>/day/vehicle

Assume 2 vehicles for 16 weeks, \$11,040<sup>00</sup>

(7) Mob / Demob

\$2.00/mile for each piece of equipment  
Assume 80 miles round trip  
~9 pieces of equipment

(8) Reveg - Costs (5.41 Acres disturbed)

<u>Item</u>	<u>Cost</u>
Alfalfa - material application	\$ 85.00 / ton \$ 250.00 / Acre
Fertilizer (200 lb per acre)	\$ 28.00 / 100 lb
Seed	\$ 350.00 / Acre
Hydro Seeding (2000 lb/acre mulch + 80 lb/acre tacifier)	\$ 800.00 / Acre
Seedlings + labor	\$ 3.00 each

(9) Monitoring Costs (9 years total)

<u>Item</u>	<u>Cost</u>
Vegetation Monitoring	\$ 4000 / year
Water qual. + Pond inspections (quarterly)	\$ 3000 / year
Annual Site maintenance	\$ 2000 / year
Subsidence monitoring	\$ 3500 / year

### Salt Lake City Area Equipment Rental Rates

Rates for Equipment based on information from Wheeler Machinery (801-974-0511) in Salt Lake City.

Monthly rates based on a 176 hour month. They do not include operator costs.

Hourly rates were estimated for comparison with rates obtained from Price, Utah.

<u>Equipment</u>	<u>SLC Monthly rate*</u>	<u>SLC Equiv. Hourly rate*</u>	<u>Price Hourly rate (includes operator)</u>
D-9 Dozer + ripper	\$ 17,000	\$ 97.00	\$ 125.00
D-7 Dozer + ripper	10,500	60.00	75.00 (no ripper)
Compactor	7500	43.00	75.00
125 Track hoe	7500	43.00	95.00
Case 580 backhoe	1800	10.20	55.00
Water Truck	4200	24.00	34.00 *

\* operator not included

includes overhead + profit.

The results of the comparison between Salt Lake City + Price rental rates indicates they are comparable assuming operator costs between \$25.00 and \$30.00 per hour.

MEANS COST DATA (1993)  $\Rightarrow$  (operator = \$ 36.75/hr)

D-9 Dozer w/ripper	\$ 16,600/mo	+ operator = \$ 23,668/mo = \$ 131.00/hr
D-7 Dozer	9,300/mo	+ operator = \$ 15,768/mo = \$ 90/hr
580 Backhoe	2,850/mo	+ operator = \$ 9318/mo = \$ 53/hr
936 Loader	5,650/mo	+ operator = \$ 12,018/mo = \$ 68/hr

Compare w/ Price Data: (Price cost / means cost)

$$\begin{array}{lcl} \text{D-9} & 125\% / 131.00 & = 95\% \\ \text{D-7} & 75\% / 90.00 & = 83\% \\ \text{Backhoe} & 55\% / 53.00 & = \underline{104\%} \end{array}$$

94% average

Average Labor Rates for Price Area

Rate information from Neilson Construction of Price, Utah  
and EIS (Mel Coonrod)  $\Rightarrow$

Neilson rates:

laborer  $\rightarrow$  16.50/hour (includes fringes + overhead + profit)

foreman  $\rightarrow$  25.00/hour (includes fringes + overhead + profit)

Mel Coonrod:

laborer  $\rightarrow$  16.50/hour (includes fringes + overhead + profit)

foreman  $\rightarrow$  30.00/hour (includes fringes + overhead + profit)

$$\text{ave. laborer} = \$16.50/\text{hr}$$

$$\text{ave. foreman} = \$27.50/\text{hr.}$$

\* From MEANS CONSTRUCTION COST DATA (1993) \* Includes fringes, overhead + profit.

$$\text{Foreman: } \$20.55 + \$11.70 = \$32.25/\text{hour}$$

$$\text{laborer: } 18.55 + 10.55 = \$29.10/\text{hour}$$

Compare w/ Utah: Utah wage / Means wage  $\Rightarrow$

$$\begin{array}{rcl} \text{Foreman} - 27.50 / 32.25 & = & 85\% \\ \text{laborer} - 16.50 / 29.10 & = & 57\% \end{array}$$

$$\text{ave.} = 71\%$$

Labor rates from Means Cost Data were adjusted based on this ratio.

## BOND ESTIMATE

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost		
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total	
DEMOLITION												
1	BLDG. #1 - SHOP											
	Prefab Metal Building (80' X 40' X 20')	64000	CF			0.10	6400.00	0.06	3840.00	0.16	10240.00	
	(020 - 604 - 0010, Including disposal) (a)											
	6" Concrete Slab with mesh (80' X 40')	3200	SF			0.43	1376.00	2.23	7136.00	2.66	8512.00	
	(020 - 754 - 0420)											
2	BLDG. #22 - SHOP ADDITION											
	Prefab Metal Building (30' X 20' X 12')	7200	CF			0.10	720.00	0.06	432.00	0.16	1152.00	
	(020 - 604 - 0010, Including disposal)											
	6" Concrete Slab with mesh (30' X 20')											
	(020 - 754 - 0420)	600	SF			0.43	258.00	2.23	1338.00	2.66	1596.00	
3	BLDG. #21 - WAREHOUSE & OFFICE											
	Prefab metal bldg. (50' X 25' X 20')	25000	CF			0.10	2500.00	0.06	1500.00	0.16	4000.00	
	(020 - 604 - 0010, Incl Disposal)											
	6" Concrete Slab with mesh (50' X 25')	1250	SF			0.43	537.50	2.23	2787.50	2.66	3325.00	
	(202 - 754 - 0420)											
4	ROCKDUST SILO #3	10	TONS						360.00	3600.00	360.00	3600.00
	12' Diam. X 30' High X 3/8" Thick Steel											
	Topple Silo	1	DAY			800.00	800.00	440.00	440.00	1240.00	1240.00	
	Cut Silo into Pieces with Torch	281	LF			0.49	137.69	2.32	651.92	2.81	789.61	
	(020-730-0010 /2)											
	Move Pieces	2	DAYS			400.00	800.00	320.00	640.00	720.00	1440.00	
	Foundation (4 - 3' X 3' X 2' Thick)	12	LF			5.20	62.00	7.70	92.00	12.90	154.80	
	(020-754-1140)											
Note:	Unless otherwise noted, no salvage value was considered for any of this equipment.											
	(a) Means Heavy Construction Cost Data, 1993											

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
5	POWER CENTER #5 ' (35' X 15')										
	8" Concrete Slab with mesh (35' X 15')	525	SF		0.57	299.00	2.97	1559.25	3.54	1858.50	
	(020-754-0420 X 1.33)										
	Chain Link Fence Removal	120	LF					0.96	115.00	0.96	115.20
	(020-554-0700)										
	Fence Disposal	1	EACH					100.00	100.00	100.00	100.00
	Transformers - Non-PCB, 3750 KVA	1	EACH					713.00	713.00	713.00	713.00
	(020-708-1570 X 1.5)										
	Disconnects/Breakers	2	TONS					360.00	720.00	360.00	720.00
	(020-718-3600)										
	Underground Wiring to Facilities	9	CLF		50.00	450.00	21.50	193.50	71.50	643.50	
	250 MCM (020-708-1950)										
	Aerial Wiring (500 MCM)	5	CLF		50.00	250.00	26.50	132.50	76.50	382.50	
	(020-708-1990)										
6	POWER POLES #6										
	Remove Wiring 6' X 30' #6	1.8	LF					6.55	11.79	6.55	11.79
	(020-708-1870)										
	Remove Conduit	100	LF					0.88	88.00	0.88	88.00
	(020-708-0100)										
	Remove Fixtures	6	EACH					40.00	240.00	40.00	240.00
	Remove Poles	6	EACH		50.00	300.00	40.00	240.00	90.00	540.00	

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
7	CONCRETE DUMPSTER PAD #4 (30' X 25')										
	12" Concret Slab - Plain (020-754-0400 X 2)	750	SF		0.78	585.00	4.04	3030.00	4.82	3615.00	
	3" Asphalt Pavement (020-554-1710)	1950	SY		1.71	3334.50	1.22	2379.00	2.93	5713.50	
8	UNDERGROUND BATHHOUSE FURNACE #7										
	CMU with Metal Roof (40' X 35' X 10') (020-604-0080)	14000	CF		0.10	1400.00	0.07	980.00	0.17	2380.00	
	6" Concrete Pad with mesh (40' X 35') (020-754-0420)	1400	SF		0.43	602.00	2.23	3122.00	2.66	3724.00	
9	INTAKE PORTAL #8										
	Seal 20' X 6' Opening - 4 Total Use 8" X 8" X 16" CMU, Reinf. & Grouted (042-232-4600, Means 1991 BCCD X 1.04)	480	SF	1.46	700.80		2.33	1118.40	3.79	1819.20	
	Drains	4	EACH	25.00	100.00		15.00	60.00	40.00	160.00	
10	VISUAL DISCONNECT #20										
	6" Concrete Pad with mesh (4' X 6') Demo Electrical Box	24	SF		0.43	10.32	2.23	53.52	2.66	63.84	
		1	EACH				120.00	120.00	120.00	120.00	
11	GENERAL STORAGE FACILITY #18										
	Metal Building (35' X 10' X 8') (020-604-0010)	2800	CF		0.10	280.00	0.06	168.00	0.16	448.00	
	8" Concrete Slab with mesh (45' X 30') (020-754-0420 X 1.33)	1350	SF		0.57	769.50	2.97	4009.50	3.54	4779.00	

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
12	MINE BELT #11 (25' X 5')	2.5	TONS					440.00	1100.00	440.00	1100.00
	(Consider this Light Mechanical Equipment. Use 020-718-3000)										
13	CRUSHER PAD #10 (30' X 24')										
	12" Concrete Slab with rebar (30' X 24') (020-754-0440 X 2)	720	SF		0.96	691.20	5.06	3643.20	6.02	4334.40	
	Concrete Walls 8" Thick, (8' X 78') (020-754-2420 X 1.1)	624	SF		1.14	711.36	5.94	3706.56	7.08	4417.92	
	Metal Decking (20' X 20') (020-726-5000)	400	SF				0.33	132.00	0.33	132.00	
	Equipment : Crushers, Hoppers (020-718-3600)	3	TONS				360.00	1080.00	360.00	1080.00	
14	BELT PORTAL # 9 (Included in Structure 8)										
15	FAN HOUSING LOCATION #2										
	6" Concrete Slab with mesh (020-754-0420)	1200	SF		0.43	516.00	2.23	2676.00	2.66	3192.00	
	Steel Building (020-604-0010)	20000	CF		0.10	2000.00	0.06	1200.00	0.16	3200.00	
16	PROPOSED SHOTCRETE #23										
	2" Plain Concrete (020-754-0400 /3)	7420	SF		0.13	964.60	0.67	4971.40	0.80	5936.00	

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
17	BULK OIL STATION # 15 (55' X 20')										
	6" Concrete Slab with mesh (020-754-0420)	1100	SF			0.43	473.00	2.23	2453.00	2.66	2926.00
	8" Concrete Foundation (020-754-1000)	150	LF			3.03	454.50	4.49	673.50	7.52	1128.00
	CMU Walls, Metal Roof (55' X 20' X 10') (020-604-0080)	11000	CF			0.10	1100.00	0.07	770.00	0.17	1870.00
	6" Concrete Slab with mesh (20' X 20') (020-754-0420)	400	SF			0.43	172.00	2.23	892.00	2.66	1064.00
	8" Concrete Wall (28' X 6') (020-754-2420 X 1.1)	168	SF			1.14	191.52	5.94	997.92	7.08	1189.44
18	HOPPER AND BELT #19										
	Equipment Demo-Hopper, Crusher, Belt (020-718-3600)	5	TONS					360.00	1800.00	360.00	1800.00
19	COAL SILO #13										
	Silo 30' Diameter X 75' High										
	Topple Silo	2	DAYS			800.00	1600.00	440.00	880.00	1240.00	2480.00
	Cut Silo into Manageable Pieces (020-730-0010 /2)	1270	LF			0.49	622.30	2.32	2946.40	2.81	3568.70
	Move Pieces	4	DAYS			400.00	1600.00	320.00	1280.00	720.00	2880.00
	6" Concrete Slab with mesh (30' X 40') (020-754-0420)	1200	SF			0.43	516.00	2.23	2676.00	2.66	3192.00
	Conveyors 4 @ 5 Tons Each (Heavy HVAC Demo, 020-718-3600)	20	TONS					360.00	7200.00	360.00	7200.00

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
20	LOAD BELT #16 (Included in Coal Silo #13)										
21	WEIGHT SHED #14 (10' X 12')										
	6" Concrete Slab with mesh (10' X 12')	120	SF			0.43	51.60	2.33	279.60	2.76	331.20
	(020-754-0420)										
	8" Concrete Walls with rebar - 8' High	352	SF			1.14	401.28	5.94	2090.88	7.08	2492.16
	(020-754-2420 X 1.1)										
	8" Concrete Roof with heavy rebar	120	SF			1.25	150.00	6.48	777.60	7.73	927.60
	(020-754-2420 X 1.2)										
22	TRUCK PAD #17 (80' X 14')										
	8" Concrete Slab - Plain	1120	SF			0.52	582.40	2.69	3012.80	3.21	3595.20
	(020-754-0400 X 1.33)										
23	FAN TRANSFORMER										
	8" Concrete Slab - Plain (6' X 8')	48	SF			0.52	24.96	2.69	129.12	3.21	154.08
	(020-754-0400 X 1.33)										
	Electrical Box 4' X 6' X 8'	0.25	TON					440.00	110.00	440.00	110.00
	(Light HVAC Item, 020-718-3000)										
24	CHAIN LINK FENCE (120' X 4')	120	LF					0.96	115.20	0.96	115.20
	(020-554-0700)										
25	CONCRETE GUARD RAIL 3' High	530	LF			3.58	1897.40	2.24	1187.20	5.82	3084.60
	(020-554-1600)										
	8" Shop Pad Retaining Wall 10' High	2500	SF			1.25	3125.00	6.48	16200.00	7.73	19325.00
	(020-754-2420 X 1.2)										

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
<b>DEMOLITION (Continued)</b>											
26	6" Concrete Pad North of Pond 28' X 13' (No Reinforcement) (020-754-0400)	364	SF			0.39	141.96	2.02	735.28	2.41	877.24
27	RETAINING WALL - 12" Thick 8' X 240' with heavy rebar (020-754-2500 X 1.2)	1920	SF			1.74	3340.80	9.12	17510.40	10.86	20851.20
28	CULVERTS 42" CMP (UD-1) (020-554-3000 X 0.5) 24" CMP (C-2, C-4, C-8) (020-554-2960 X 0.5) 18" CMP + PVC (C-1, UD-3) (020-554-2930 X 0.5) 12" CMP (C-5, C-6, C-7) (020-554-2900 X 0.5)	295	LF			1.12	330.40	2.68	790.60	3.80	1121.00
		275	LF			0.84	231.00	2.00	550.00	2.84	781.00
		495	LF			0.67	331.65	1.61	796.95	2.28	1128.60
		230	LF			0.58	133.40	1.38	317.40	1.96	450.80
	Excavation for Culverts 2' Wide X 3' Deep X 1295 LF (022-254-0060) 1/2 CY Loader/Backhoe	288	CY			1.41	406.08	1.71	492.48	3.12	898.56
	Backfill for Culverts 2' Wide X 5' Deep X 1295 LF (022-254-3020)	480	CY			0.59	283.20	0.67	321.60	1.26	604.80

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
29	DROP INLETS										
	Remove Inlet	3	EACH			50.00	150.00	120.00	360.00	170.00	510.00
	(020-554-0020)										
	Backfill										
	4' X 4' X 5' X 3 Holes	10	CY			0.59	5.90	0.67	6.70	1.26	12.60
30	CONCRETE INLETS										
	UD-1 (See Item #28)										
	UD-3 Concrete Headwall	24	SF			1.04	24.96	5.40	129.60	6.44	154.56
	8" X 8' X 4.5'										
	(020-754-2420)										
31	SEDIMENT POND RISER AND CULVERT										
	24" CMP X 110 LF	110	LF			0.84	92.40	2.00	220.00	2.84	312.40
	(020-554 - 2960 X 0.5)										
	Excavation for Culvert	24	CY			1.41	33.84	1.71	41.04	3.12	74.88
	2' X 3' X 110'										
	(022-254-0060)										
	Backfill for Culvert	41	CY			0.59	24.19	0.67	27.47	1.26	51.66
	2' X 5' X 110'										
	(022-254-3020)										
32	GABION RETAINING WALL @ POND										
	5' High X 2' Thick X 200 LF	2000	CF			0.61	1220.00	0.90	1800.00	1.51	3020.00
	(Considered as Dry Set Stone,										
	020-554-1500)										

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	DEMOLITION (Continued)										
33	SEAL WELLS	6	EACH	30.00	180.00			250.00	1500.00	280.00	1680.00
	Excavate, Torch, Concrete Seal, Backfill										
34	LOAD, HAUL, NON-COMBUSTIBLE										
	MATERIALS - 20 Mile Haul	2000	MILE			0.25	500.00	0.10	200.00	0.35	700.00
	Assume 10 CY Truck, 1000 CY (Loose)										
	of Material on 100 Trips										
	(020-620-5100)										
	Demolition Labor Subtotal								132390.78		
	Demolition Equipment Subtotal						46966.41				
	Labor Adjustment (29%)								38393.33		
	Equipment Adjustment (6%)					2817.98					
	Demolition Materials Total				980.80						
	Demolition Equipment Total						44148.43				
	Demolition Labor Total								93997.45		
	Demolition Total								139126.68		

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Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
	ROUGH GRADING - 2530 CY										
1	D-9 Bulldozer w/ Ripper + Operator	120	HRS							112.50	13500.00
2	D-7 Bulldozer + Operator	120	HRS							67.50	8100.00
3	Compactor + Operator	120	HRS							67.50	8100.00
4	125 Trackhoe + Operator	80	HRS							85.00	6800.00
5	Case 580 Backhoe	80	HRS							50.00	4000.00
6	Water Truck	25	DAYS							270.00	6750.00
7	Pump	25	DAYS							110.00	2750.00
8	Foreman	200	HRS					27.00	5400.00	27.00	5400.00
9	Laborers - 2	400	HRS					15.00	6000.00	15.00	6000.00
10	Mob/Demob - 80 miles RT (a)	720	MILES		2.00	1440.00				2.00	1440.00
11	Personnel Carriers - 2 vehicles (a)	80	DAYS		138.00	11040.00				138.00	11040.00
12	Surveying	40	HRS					40.00	1600.00	40.00	1600.00
	Rough Grading Total										75480.00
	(a) Costs for entire project										

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23

Item No.	Description	Quantity	Unit	Material Cost		Equipment Cost		Labor Cost		Project Cost	
				Per Unit	Total	Per Unit	Total	Per Unit	Total	Per Unit	Total
<b>REVEGETATION</b>											
1	Hydroseeding (2000 lb/acre of mulch + 80 lb/acre tacifier)	5.41	ACRES							800.00	4328.00
2	Seed Mix	5.41	ACRES	350.00	1893.50					350.00	1893.50
3	Alfalfa - 1 ton/acre	5.41	ACRES	85.00	459.85			250.00	1352.50	335.00	1812.35
4	Fertilizer - 200 lb/acre	5.41	ACRES	56.00	302.96			100.00	541.00	156.00	843.96
5	Seedlings	610	EACH	1.00	610.00			2.00	1220.00	3.00	1830.00

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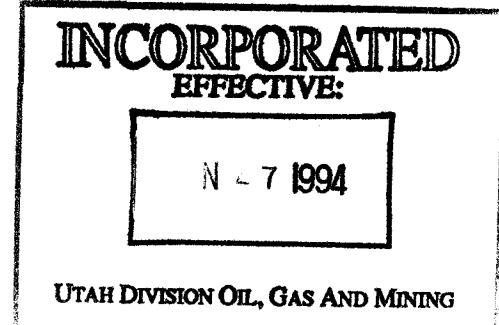
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**Addendum to Appendix 5-20,  
Bond Estimate (DOGM Determination)**

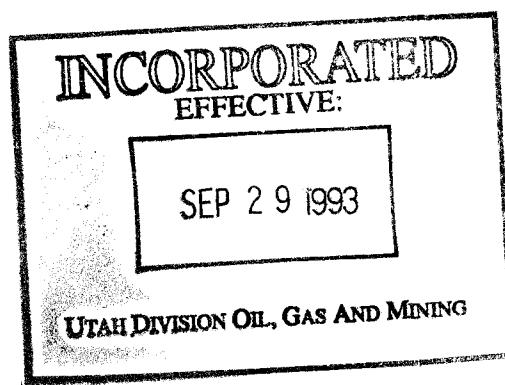
**Additional Projects incurred after the Bond Estimate**

<u>Project</u>	<u>Estimated Cost</u>	<u>Remarks</u>
Shotcrete of highwalls	\$20,604	Costs for this project have already been projected within the bond estimate and listed as item #23. Any further costs will be minimal and will be included within the contingency of the bond.



added to the bond estimate, Appendix 5-20, 6/20/94

**Appendix 5-20**  
**Bond Estimate (DOGM Determination)**

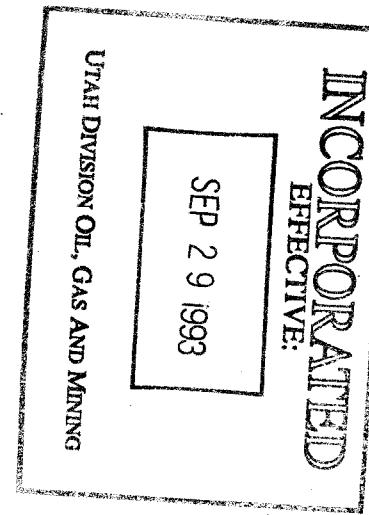


**Revised 9/13/93**

GEN BOND.WQ1

RECLAMATION BOND ESTIMATE  
GENWAL COAL COMPANY  
AUGUST, 1993 -WHW

DEMOLITION	\$294,451
BACKFILLING AND GRADING	\$93,321
DRAINAGE CONTROLS	\$49,215
REVEGETATION	\$14,724
MONITORING	\$123,750
SUBTOTAL	\$575,461
INDIRECT COSTS	
CONTINGENCIES	10.00%
ENGINEERING FEES	5.00%
ESCALATION FACTOR (1.42% OVER 5 YEARS)	7.10%
TOTAL INDIRECT COSTS	22.10%
TOTAL	\$702,638
BOND AMOUNT ( ROUNDED TO NEAREST \$1,000)	\$703,000



(G-FW WHL.W&I)

BOND ESTIMATE

DEMOLITION AND REMOVAL COSTS

CRANDALL CANYON MINE

GENWAL COAL COMPANY

ACT/015/032

REVISED ESTIMATE JUNE, 1993 - WHW

STRUCTURE	MATERIALS	UNIT COST	UNITS	QUANTITY	COST
<b>SHOP #1</b>					
Prefab metal bldg. demo	Mixture of types, average	\$0.21	C.F.	64000.00	\$13,440
Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	3200.00	\$12,704
Foundation disp.	Disposal on site	\$6.20	C.Y.	119.00	\$738
(SUBTOTAL)					\$26,882
<b>VENTILATION FAN #2</b>					
Steel bldg. demo	Mixture of types, average	\$0.21	C.F.	20000.00	\$4,200
Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	1200.00	\$4,764
Foundation disp.	Disposal on site	\$6.20	C.Y.	44.00	\$273
(SUBTOTAL)					\$9,237
<b>ROCKDUST SILO #3</b>					
12'daim. x 30'high x 3/8"steel					
Structure demo.	Operator's estimate + overhe	\$432.00	tons	10.00	\$4,320
Topple silo	Operator's estimate + overhe	\$1,408.00	days	1.00	\$1,408
Cut silo with torch	Steel 1 " thick /2	\$4.18	L.F.	281.00	\$1,173
On site disposal of steel	Operator's estimate + overhe	\$824.00	days	2.00	\$1,648
Foundation demo.	Footings concrete 2' x 3'	\$17.65	L.F.	12.00	\$212
Foundation disp.	Disposal up to five miles	\$11.00	C.Y.	5.00	\$55
(SUBTOTAL)					\$8,816

UTAH DIVISION OF, GAS AND MINING

SEP 29 1993

INCORPORATED  
EFFECTIVE:

**CONCRETE DUMP. PAD #4**

Concrete Slab	12" Concrete Slab plain	\$7.20	S.F.	750.00	\$5,400
Asphalt Pavement	3" bituminous	\$3.76	S.Y.	1950.00	\$7,332
Concrete, asphalt disp.	Disposal on site	\$6.20	C.Y.	381.00	\$2,362
(SUBTOTAL)					\$15,094

**POWER CENTER #5**

Foundation demo.	8' concrete slab with mesh	\$5.29	S.F.	525.00	\$2,779
Foundation disp.	Disposal on site	\$6.20	C.Y.	26.00	\$161
Chain Link Fence	remove fence 8' to 10'	\$1.50	L.F.	120.00	\$180
Fence Disposal	Operator's cost estimate +	\$120.00	Ea.	1.00	\$120
Transformers -Non-PCB	3750 KVA	\$3,575.00	Ea.	1.00	\$3,575
Disconnect/Breakers	Mechanical equipment heav	\$545.00	Ton	2.00	\$1,090
Underground wiring facil	conductors	32	C.L.F	9.00	\$288
Aerial wiring	conductors	39.5	C.L.F	5.00	\$198
(SUBTOTAL)					\$8,391

**POWER POLE #6**

Remove wiring 6'30' #6	#6	\$9.85	C.L.F.	1.80	\$18
Remove conduit	Ridig galvanized steel 1/2 to	\$1.33	L.F.	100.00	\$133
Remove Fixtures	Operator's estimate + overh	\$48.00	Ea.	6.00	\$288
Remove poles	Operator's estimate + overh	\$108.00	Ea.	6.00	\$648
(SUBTOTAL)					\$1,087

**UNDERGROUND BATHHOUSE/OFFICE #7**

CMU with metal roof	Masonry	\$0.21	C.F.	14000.00	\$2,940
Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	1400.00	\$5,558
Foundation disp.	Disposal on site	\$6.20	C.Y.	52.00	\$322
(SUBTOAL)					\$8,820

INCORPORATED  
EFFECTIVE:  
SEP 29 1993

UTAH DIVISION OIL, GAS AND MINING

**PORTALS #8**

Seal portals (SUBTOTAL)	Seal Portals	\$3,000.00	Ea.	4.00	\$12,000
					\$12,000

**BELT PORTAL #9**      (included in structure 8)**CRUSHER PAD #10**

Foundation demo.	12" concrete slab with rebar	\$8.98	S.F.	720.00	\$6,466
Concrete wall demo.	8" concrete wall ave. reinforc	\$10.62	S.F.	624.00	\$6,624
Concrete disp.	Disposal on site	\$6.20	C.Y.	84.00	\$521
Metal Decking (20'x20')	Siding metal, horizontal	\$0.52	S.F.	400.00	\$208
Equipment: Crushers, H (SUBTOTAL)	Mechanical equipment heav	\$545.00	Ton	3.00	\$1,635
					\$15,453

**MINE BELT #11**

Light Material (SUBTOTAL)	Mechanical equipment light i	\$665.00	Ton	2.50	\$1,663
					\$1,668

**COAL SILO #13**

Silo 30' daim. 75' high					
Topple Silo	Operator's estimate + overh	\$1,488.00	Day	2.00	\$2,976
Cut silo into manageable	Steel 1" thick plate /2	\$4.18	L.F.	1270.00	\$5,302
Move pieces	Operator's estimate + overhe	\$864.00	Day	4.00	\$3,456
Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	1200.00	\$4,764
Foundation disp.	Disposal on site	\$6.20	C.Y.	44.00	\$273
Conveyors 4 @ 5 tons e	Mechanical equipment heav	\$545.00	Ton	20.00	\$10,900
(SUBTOTAL)					\$27,671

**WEIGHT SHED #14**

UTAH DIVISION OIL, GAS AND MINING

SEP 29 1993
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**INCORPORATED**  
EFFECTIVE:

6" concrete slab with me	6" reinforced, wire mesh	\$3.97	S.F.	120.00	\$476
8" concrete walls with re	8" thick	\$1.82	S.F.	352.00	\$639
8" concrete roof with hea	8" thick	\$11.58	S.F.	120.00	\$1,390
Concrete disp.	Disposal on site	\$6.20	C.Y.	28.00	\$174
(SUBTOTAL)					\$2,678

#### BULK OIL STATION #15

6" concrete slab with me	6" reinforced, wire mesh	\$3.97	S.F.	1100.00	\$4,367
8" concrete foundation	Footings concrete 1'x 2'	\$11.33	L.F.	150.00	\$1,700
CMU walls, metal roof	Masonry	\$0.21	C.F.	11000.00	\$2,310
6" concrete slab with mes	6" reinforced, wire mesh	\$3.60	S.F.	400.00	\$1,440
8" concrete wall	8" thick	\$9.65	S.F.	168.00	\$1,621
Concrete disp.	Disposal on site	\$6.20	C.Y.	79.00	\$490
Tank disposal	est. based on Means	\$2,000.00		1.00	\$2,000
(SUBTOTAL)					\$13,928

#### LOAD BELT (SCALE) #16 included in coal silo #13

TRUCK PAD #17

Foundation demo.	8" thick, plain concrete	\$4.79	S.F.	1120.00	\$5,363
Foundation disp	Disposal on site	\$6.20	C.Y.	55.00	\$341
(SUBTOTAL)					\$5,704

#### GENERAL STORAGE FACILITY #18

Metal bldg.	Mixture of types, average	\$0.21	C.F.	2800.00	\$588
Foundation demo.	8" concrete slab with mesh	\$5.29	S.F.	1350.00	\$7,146
Foundation disp.	Disposal on site	\$6.20	C.Y.	67.00	\$415
(SUBTOTAL)					\$8,149

#### RECLAIM HOPPER/BELT #19

UTAH DIVISION OIL, GAS AND MINING

SEP 29 1993

INCORPORATED  
EFFECTIVE:

Equipment demo-hoppe (SUBTOTAL)	Mechanical equipment heav	\$545.00	Ton	5.00	\$2,725
					\$2,725

#### VISUAL DISCONNECT #20

Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	24.00	\$95
Foundation disp.	Disposal on site	\$6.20	C.Y.	1.00	\$6
Demo electrical box	Operator's estimate + overh	\$144.00	Ea.	1.00	\$144
(SUBTOTAL)					\$245

#### NEW WAREHOUSE AND OFFICE BUILDING #21

Prefab metal bldg.	Mixture of types, average	\$0.21	C.F.	25000.00	\$5,250
Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	1250.00	\$4,963
Foundation disp.	Disposal on site	\$6.20	C.Y.	46.00	\$285
(SUBTOTAL)					\$10,498

#### PROPOSED SHOP EXP. #22

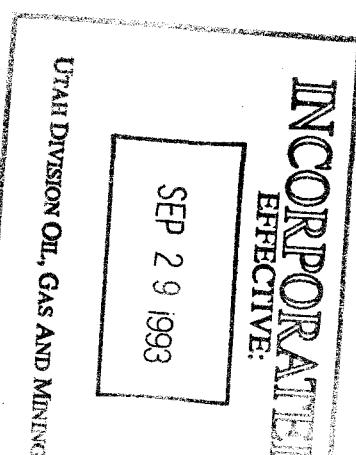
Prefab metal bldg.	Mixture of types, average	\$0.21	C.F.	7200.00	\$1,512
Foundation demo.	6" reinforced, wire mesh	\$3.97	S.F.	600.00	\$2,382
Foundation disp.	Disposal on site	\$6.20	C.Y.	22.00	\$136
(SUBTOTAL)					\$4,030

#### PROPOSED SHOTCRETE #23

Concrete demo.	2" thick concrete +200% for	\$2.70	S.F.	7420.00	\$20,034
Concrete disp.	Disposal on site	\$6.20	C.Y.	92.00	\$570
(SUBTOTAL)					\$20,604

#### FAN TRANSFORMER

Foundation demo.	8" concrete plain	\$4.79	S.F.	48.00	\$230
Foundation disp.	Disposal on site	\$6.20	C.Y.	2.00	\$4
Electrical box	Mechanical equipment light i	\$665.00	Ton	0.25	\$166



(SUBTOTAL)				\$400
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#### CHAIN LINK FENCE

Chain link fence 120' x 4'	remove fence 6' high	\$1.86 L.F.	120.00	\$223
(SUBTOTAL)				\$223

#### CONCRETE GUARD

3' high	Median barrier, precast concr	\$7.40 L.F.	530.00	\$3,922
Retaining wall demo.	8" thick	\$11.58 S.F.	2500.00	\$28,950
Retaining wall disp.	Disposal on site	\$6.20 C.Y.	123.00	\$763
(SUBTOTAL)				\$33,635

#### 6" CONCRETE PAD NORTH OF POND

Pad demo.	6" reinforce, rods	\$4.49 S.F.	364.00	\$1,634
Pad disp.	Disposal on site	\$6.20 C.Y.	13.00	\$81
(SUBTOTAL)				\$1,715

#### RETAINING WALL

Retaining wall demo.	12" thick	\$16.20 S.F.	1920.00	\$31,104
Retaining wall disp.	Disposal up to five miles	\$11.00 C.Y.	142.00	\$1,562
(SUBTOTAL)				\$32,666

#### CULVERTS

42" CMP (UD-1)	48"	\$26.33 L.F.	295.00	\$7,767
24" CMP (C-2, C-4)	24"	\$4.92 L.F.	275.00	\$1,353
18" CMP&PVC(C-1,UD-	18"	\$4.21 L.F.	495.00	\$2,084
12" CMP (SED. TRAP O	18"	\$4.21 L.F.	230.00	\$968
(SUBTOTAL)				\$12,173

#### GUARD RAIL

UTAH DIVISION OIL, GAS AND MINING

SEP 29 1993

INCORPORATED  
EFFECTIVE:

Guard rail remove	Guide rail remove only	\$5.50 L.F.	150.00	\$825
Guard post removed (SUBTOTAL)	Guide posts remove only	\$13.30 Ea.	10.00	\$133
				\$958

#### DROP INLETS

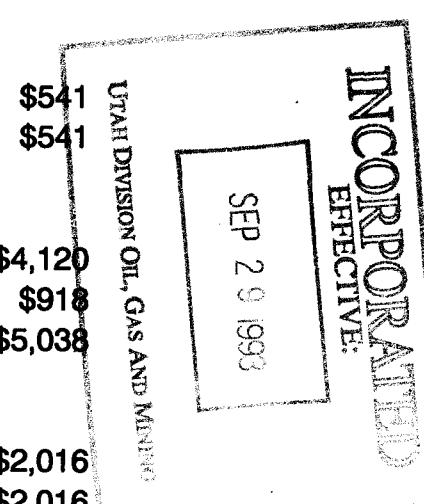
Remove inlets	Remove existing catch basin	\$242.00 Ea.	3.00	\$726
Backfill	Operator's estimate + overheat	\$15.12		\$15
Concrete disp. (SUBTOTAL)	Disposal on site	6.2 C.Y.	1	\$6
				\$741

#### CONCRETE INLETS

UD-1 (see item #28)				
UD-3 concrete headwall	8" thick	\$9.65 S.F.	24.00	\$232
Concrete disp. (SUBTOTAL)	Disposal on site	\$6.20 C.Y.	1.00	\$6
				\$238

#### SEDIMENT POND RISER AND CULVERT

CMP removal (SUBTOTAL)	24"	\$4.92 L.F.	110.00	
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#### GABION RETAINING WALL AT POND

Remove gabions	Dry set stone	\$2.06 C.F.	2000.00	\$4,120
Disp. gabions (SUBTOTAL)	Disposal on site	\$6.20 C.Y.	148.00	\$918
				\$5,038

#### SEAL WELLS

Excavate, torch, concret (SUBTOTAL)	Operator's estimate + overheat	\$336.00 Ea.	6.00	\$2,016
				\$2,016

#### LOAD, HAUL, NON-COMBUSTIBLE MATERIALS

Assume 10 cy trucks

1000 cy (loose)      Haul mile over C.Y. truck      \$0.43 mi.      2000.00      \$860

TOTAL

\$294,451

**INCORPORATED**  
EFFECTIVE:

SEP 29 1993

UTAH DIVISION OIL, GAS AND MINING

(Demolition WQ1)

DEMOLITION COSTS  
MEANS 1993

DEMOLITION      UNIT COST    UNITS    MEANS REFERENCE NUMBE

SITE DEMOLITION

Remove existing catch ba      242 Ea.      020 554 0020

Chain link fence

remove fence 8' to 10'      \$1.50 L.F.      020 554 0700  
remove fence 6' high      \$1.86 L.F.      020 554 0750

Guide rail remove only      \$5.50 L.F.      020 554 0800  
Guide posts remove only      \$13.30 Ea.      020 554 0860

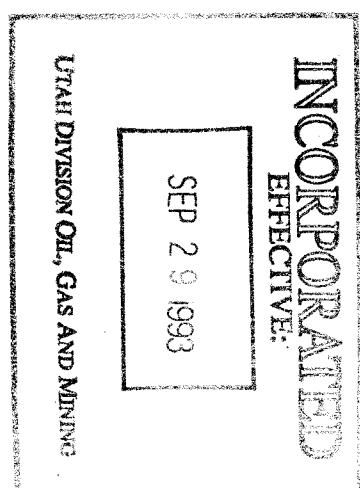
Dry set stone      2.06 C.F.      020 554 1500

Median barrier, precast co      7.4 L.F.      020 554 1600

Pavement removal

3" bituminous      \$3.76 S.Y.      020 554 1710  
4" to 6" bituminous      \$6.20 S.Y.      020 554 1750  
bituminous drive way      \$3.82 S.Y.      020 554 1800

Concrete to 6" thick, me      \$10.20 S.Y.      020 554 1900  
Concret to 6" thick, rod r      \$13.00 S.Y.      020 554 2000



Haul mile over C.Y. truck      0.43 mi.      020 620 5100

**SELECTIVE DEMOLITION  
FRAMING DEMOLITION**

**ELECTRICAL DEMOLITION**

**TRANSFORMER 3 PHASE**

Ridig galvanized steel 1/  
600 KV PRIMARY      1.33 L.F.      020 708 0100

750 KVA      \$715.00 Ea.      020 708 1570

Wire to be removed

#6      9.85 C.L.F.      020 708 1870

250 MCM      32 C.L.F.      020 708 1950

300 MCM      34 C.L.F.      020 708 1960

350 MCM      35.5 C.L.F.      020 708 1970

400 MCM      37.5 C.L.F.      020 708 1980

500 MCM      39.5 C.L.F.      020 708 1990

**HVAC**

Mechanical equipment li      665 Ton      020 718 3000

Mechanical equipment h      545 Ton      020 718 3600

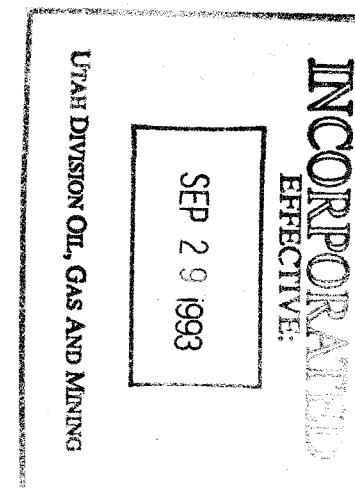
**ROOFING AND SIDING DEMO**

Siding metal, horizontal      0.52 S.F.      020 726 5000

**Torch Cutting**

Steel 1" thick plate      \$8.35 L.F.      020 730 0010

Steel 1" diameter bar      \$1.27 Ea.      020 730 0040



**CONCRETE REMOVAL  
FOOTING AND FOUNDATIONS DEMOLITION**

**Floor slab on grade**

4" thick, plain concrete	\$2.70 S.F.	020 754 0240
4" reinforced, wire mes	\$2.87 S.F.	020 754 0280
4" reinforced, rods	\$3.37 S.F.	020 754 0300

6" thick, plain concrete	\$3.60 S.F.	020 754 0400
6" reinforced, wire mes	\$3.97 S.F.	020 754 0420
6" reinforce, rods	\$4.49 S.F.	020 754 0440

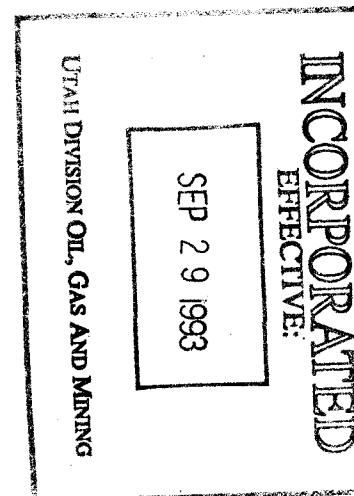
Footings concrete 1'x 2'	\$10.30 L.F.	020 754 1000
Footings concrete 1.5' x	\$12.35 L.F.	020 754 1080
Footings concrete 1.5' x	\$15.45 L.F.	020 754 1120
Footings concrete 2' x 3'	\$17.65 L.F.	020 754 1140
average reinforcement	add 10%	020 754 1200
heavy reinforcement	add 20%	020 754 1220

**WALLS, BLOCK**

4" thick	1.48 S.F.	020 754 2000
6" thick	1.57 S.F.	020 754 2040
8" thick	1.65 S.F.	020 754 2080
12 " thick	1.7 S.F.	020 754 2100

**WALLS, CONCRETE**

6" thick	8.45 S.F.	020 754 2400
8" thick	9.65 S.F.	020 754 2420
10" thick	11.25 S.F.	020 754 2440



12" thick	13.5 S.F.	020 754 2500
ave. reinforcement + 10%		020 754 2600
heavy reinforcement + 20%		020 754 2620
For small or congested sites add up to 200%		020 754 4000
Disposal on site	6.2 C.Y.	020 754 4200
Disposal up to five miles	11 C.Y.	020 754 4250

#### **REMOVAL OF UNDERGROUND TANKS**

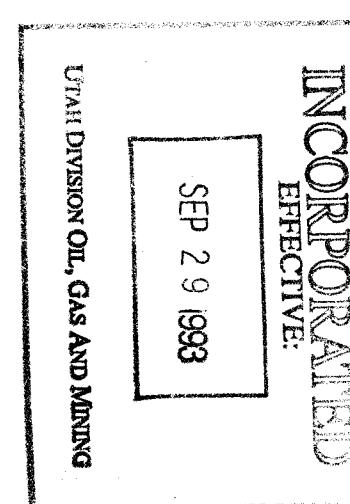
Petrol. tanks non-leaking

Excavate & load

3000 to 5000 gal	\$340.00 Ea.	020 880 0110
6000 to 8000 gal	\$425.00 Ea.	020 880 0120
9000 to 12000 gal	\$565.00 Ea.	020 880 0130
Haul tank 100 mile round trip		
3000 to 5000 gal	\$500.00 Ea	020 880 0123
6000 to 8000 gal	\$600.00 Ea.	020 880 0126
9000 to 12000 gal	\$800.00 Ea.	020 880 0129

#### **DEMOLITION COSTS WELLINGTON MRP 1992**

Power poles	\$70.15 each	Wellington MPR 1992
Conductors	\$1,102.00 mile	Wellington MPR 1992



demolition labor

\$26.33 man hour Wellington MPR 1992

D9L DOZER

\$157.44 hour  
\$0.00 hour

INCORPORATED  
EFFECTIVE:

SEP 29 1993

UTAH DIVISION OIL, GAS AND MINING

G-EN-EART.WD1

BOND ESTIMATE  
FOR BACKING AND GRADING  
GENWAL COAL COMPANY AUGUST, 1993 - WHW

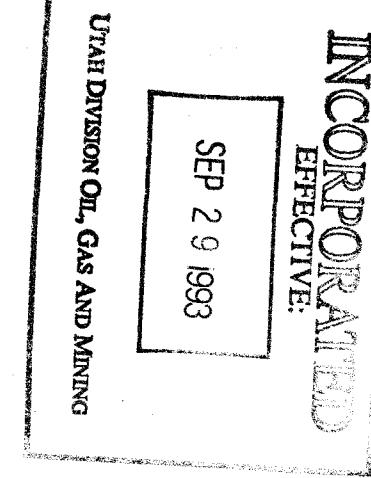
ROUGH GRADING

RIPPING

VOLUME OF MATERIAL TO BE RIPPED (BCY)	2530.00
SWELL FACTOR	1.30
VOLUME OF MATERIAL TO BE RIPPED (LCY)	3289.00
PRODUCTION FOR CAT D8L BULLDOZER (LCY/HR)	1250.00
PRODUCTION FACTORS	
AVERAGE OPERATOR	0.75
MATERIAL	0.80
JOB EFFICIENCY	0.83
SLOPE FACTOR	1.00
ESTIMATED PRODUCTION (LCY/HR)	622.50
TOTAL RIPPING TIME (HRS)	5.28
OPERATOR ASSUMES 8 HOURS RIPPING TIME	8.00
EQUIPMENT COSTS	
D8N monthly rate	\$10,955.00
Ripper parallelgram monthly rate	\$1,700.00
D8N operating cost per hour	\$27.10
Ripper operating cost per hour	\$3.40
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$112.64
LABOR COSTS	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost per hour	\$36.75
SUBTOTAL RIPPING	\$1,195.17

EXCAVATION

VOL. OF MATERIAL TO BE EXCAVATED (BCY)	2530.00
SWELL FACTOR	1.30
VOL. OF MATERIAL TO BE EXCAVATED (LCY)	3289.00
PRODUCTION FOR CAT 229 EXCAVATOR (LCY/HR)	120.00



**PRODUCTION FACTORS**

JOB EFFICIENCY	0.83
ESTIMATED PRODUCTION (LCY/HR)	99.60
TOTAL EXCAVATING TIME (HRS)	33.02
OPERATOR ASSUMES 35 HOURS	35.00

**EQUIPMENT COSTS**

229 monthly rate	\$8,060.00
229 operating cost per hour	\$19.95
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$72.32
<b>LABOR COSTS</b>	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost	\$36.75
<b>SUBTOTAL EXCAVATION</b>	<b>\$3,817.54</b>

**HAULING**

VOLUME OF MATERIAL TO BE GRADED (LCY)	1645.00
PRODUCTION FOR TRUCKS (LCY/HR)	100.00
TOTAL TRUCK TIME (HRS) per truck assume	35.00

**EQUIPMENT COSTS**

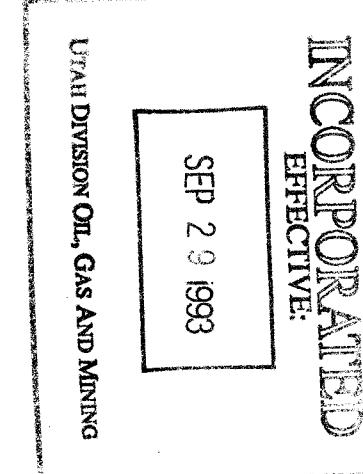
10 yd <sup>3</sup> dump trucks monthly rates	\$2,400.00
10 yd <sup>3</sup> dump truck operating costs	\$12.20
Equipment overhead and profit	10.00%
Total equipment cost per truck hour	\$28.42

**LABOR COSTS**

Operator's base rate	\$19.45
Operator's overhead and profit	53.00%
Total labor cost per driver hour	\$29.76
<b>TOTAL OPERATING COSTS PER TRUCK OPER. INCL</b>	<b>\$2,036.25</b>
<b>NUMBER OF TRUCKS</b>	<b>2</b>
<b>SUBTOTAL HAULING</b>	<b>\$4,072.50</b>

**DOZING/GRADING ASSUME HOUR HOURS**

VOLUME OF MATERIAL TO BE DOZED/GRADED	2530.00
SWELL FACTOR	1.30
VOLUME OF MATERIAL TO BE RIPPED (LCY)	3289.00
TOTAL DOZING/GRADING TIME ASSUME 40 HOUR	40.00
EQUIPMENT COSTS	



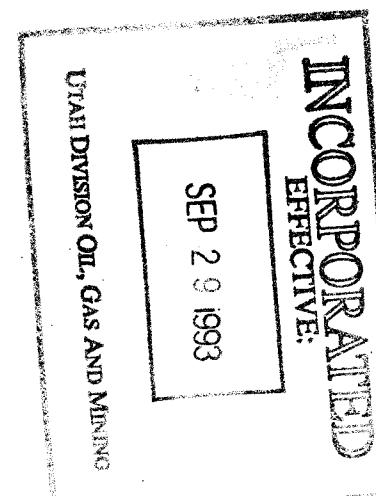
D8N monthly rate	\$10,955.00
D8N operating cost per hour	\$27.10
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$98.28
<b>LABOR COSTS</b>	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost	\$36.75
<b>SUBTOTAL DOZING/GRADING</b>	<b>\$5,401.25</b>

#### COMPACTION

VOLUME OF MATERIAL TO BE COMPACTED	2530.00
SWELL FACTOR	1.30
VOLUME OF MATERIAL TO BE RIPPED (LCY)	3289.00
TOTAL COMPACTING TIME ASSUME 40 HOURS	40.00
<b>EQUIPMENT COSTS</b>	
Assume CAT 815B monthly rate	\$8,095.00
CAT 815B operating cost per hour	\$21.90
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$74.68
<b>LABOR COSTS</b>	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost	\$36.75
<b>SUBTOTAL COMPACTION</b>	<b>4457.45</b>

#### EXCAVATION STREAM CHANNELS

TOTAL EXCAVATING TIME (HRS)	30.00
<b>EQUIPMENT COSTS</b>	
229 weekly rate	\$8,060.00
229 operating cost per hour	\$19.95
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$72.32
<b>LABOR COSTS</b>	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost	\$36.75
<b>SUBTOTAL EXCAVATION STREAM CHANNELS</b>	<b>\$3,272.18</b>



**MISCELLANEOUS EXCAVATION**

TOTAL EXCAVATING TIME (HRS)	40.00
EQUIPMENT COSTS	
Case 580 SUPER K monthly rate	\$2,300.00
Case 580 SUPER K operating cost per hour	\$5.45
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$20.37
LABOR COSTS	
Operator's base rate	\$23.10
Operator's overhead and profit	52.50%
Total labor cost	\$35.23
<b>SUBTOTAL MISCELLANEOUS EXCAVATION</b>	<b>\$2,223.90</b>

**GENERAL PROJECT EXPENCES****WATER TRUCK**

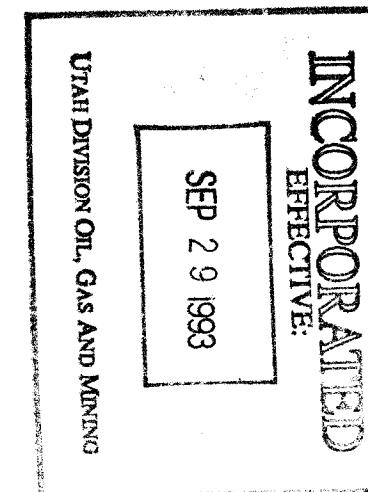
total time	100.00
water truck monthly rate (7,000 off-highway)	\$9,645.00
water truck operating cost per hour	\$36.45
equipment overhead and profit	10.00%
total equipment cost per hour	\$100.38
labor costs	
operator's base rate	\$19.45
operator's overhead and profit	53.00%
total labor cost	\$29.76
<b>subtotal water truck</b>	<b>\$13,013.48</b>

**PICKUP TRUCKS**

number of trucks	2.00
hours each truck is used	100.00
total time	200.00
truck monthly rate	\$750.00
truck operating cost per hour	\$2.80
equipment overhead and profit	10.00%
total equipment cost per hour	\$7.77
<b>total equiment cost</b>	<b>\$1,553.50</b>

**LABOR**

laborers	2.00
base wage rate	\$18.55
labor rates	57.00%
<b>total wage rate</b>	<b>\$29.12</b>

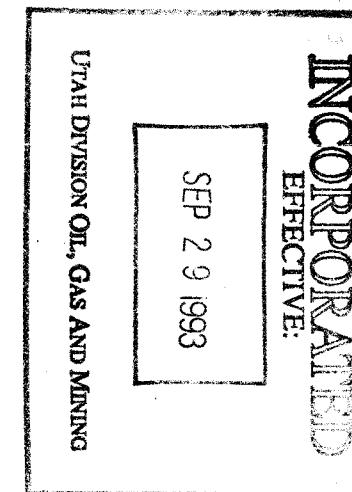


hours per laborer	100.00
total labor cost (labors)	\$2,912.35
MECHANIC	
mechanics	1.00
base wage rate	\$25.55
labor rates	51.70%
total wage rate	\$38.76
hours per mechanic	100.00
total labor cost (mechanic)	\$3,875.94
FOREMAN	
foreman	1.00
base wage rate	\$26.10
labor rates	57.40%
total wage rate	\$41.08
hours per foreman	100.00
total labor cost (foreman)	\$4,108.14
Mob/Demob -250 miles round trip	
equipement mobilization demolization oper. est.	\$4,500.00
total mob/demob costs	\$4,500.00
SURVEYING assume 3 man crew 40 hours	
base rate per day	\$755.00
number of days	5.00
total survey costs	\$3,775.00
<b>SUBTOTAL MISCELLANEOUS EXPENSES</b>	<b>\$33,738</b>

#### TOPSOIL DISTRIBUTION

##### SOIL TESTING

labor base rate	50.00
labor factor	0.53
total labor rate	76.25
feild hours	18.00
total labor rates	1372.50
lab fee	280.00
overhead and profit	0.10
lab samples	18.00



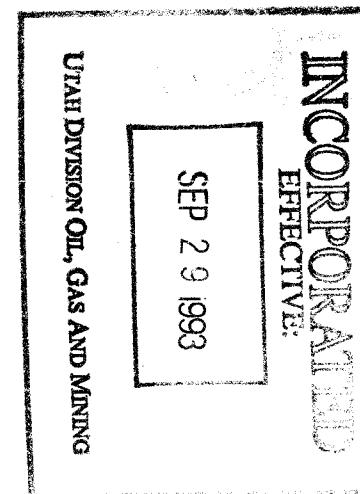
total lab fees	5544.00
<b>TOTAL SOIL TESTING</b>	<b>6916.50</b>

#### LOADING

VOL. OF MATERIAL TO BE LOADED (BCY)	3701.00
SWELL FACTOR	1.10
VOL. OF MATERIAL TO BE LOADED (LCY)	4071.10
PRODUCTION FOR CAT 936 W/3 YD BUCKET	120.00
TOTAL EXCAVATING TIME (HRS)	33.93
OPERATOR ASSUMES 40 HOURS	40.00
EQUIPMENT COSTS	
936 monthly rate	\$3,835.00
936 operating cost per hour	\$10.55
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$35.57
LABOR COSTS	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost	\$36.75
<b>SUBTOTAL LOADING</b>	<b>\$2,893.05</b>

#### HAULING

VOLUME OF MATERIAL TO BE HAULED	4071.10
PRODUCTION FOR TRUCKS (LCY/HR)	100.00
TOTAL TRUCK TIME (HRS)	40.71
OPERATOR ASSUMES 40 HOURS PER TRUCK	40.00
EQUIPMENT COSTS	
10 yd3 dump trucks weekly rates	\$2,400.00
10 yd3 dump truck operating costs	\$12.20
Equipment overhead and profit	10.00%
Total equipment cost per truck hour	\$28.42
LABOR COSTS	
Operator's base rate	\$19.45
Operator's overhead and profit	53.00%
Total labor cost per driver hour	\$29.76
<b>TOTAL OPERATING COSTS PER TRUCK OPER. INCL</b>	<b>\$2,327.14</b>
NUMBER OF TRUCKS	2
<b>SUBTOTAL HAULING</b>	<b>\$4,654.28</b>



DOZING/GRADING ASSUME HOUR HOURS

VOLUME OF MATERIAL TO BE DOZED/GRADED	3701.00
SWELL FACTOR	1.10
VOLUME OF MATERIAL TO BE RIPPED (LCY)	4071.10
TOTAL DOZING/GRADING TIME ASSUME 40 HOUR	40.00
EQUIPMENT COSTS	
D8N monthly rate	\$10,955.00
D8N operating cost per hour	\$27.10
Equipment overhead and profit	10.00%
Total equipment cost per hour	\$98.28
LABOR COSTS	
Operator's base rate	\$24.10
Operator's overhead and profit	52.50%
Total labor cost	\$36.75
SUBTOTAL DOZING/GRADING	\$5,401.25

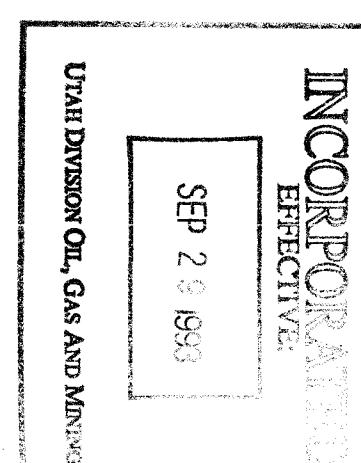
GENERAL PROJECT EXPENCES

WATER TRUCK

total time	60.00
water truck monthly rate	\$9,645.00
water truck operating cost per hour	\$36.45
equipment overhead and profit	10.00%
total equipment cost per hour	\$100.38
labor costs	
operator's base rate	\$19.45
operator's overhead and profit	53.00%
total labor cost	\$29.76
subtotal water truck	\$7,808.09

PICKUP TRUCKS

number of trucks	2.00
hours each truck is used	60.00
total time	120.00
truck monthly rate	\$750.00
truck operating cost per hour	\$2.80
equipment overhead and profit	10.00%
total equipment cost per hour	\$7.77
total equiment cost	932.10
LABOR	
laborers	2.00



base wage rate	18.55
labor rates	0.57
total wage rate	29.12
hours per laborer	60.00
total labor cost (labors)	1747.41
<b>MECHANIC</b>	
mechanics	1.00
base wage rate	25.55
labor rates	0.52
total wage rate	38.76
hours per mechanic	60.00
total labor cost (mechanic)	2325.56
<b>FOREMAN</b>	
foreman	1.00
base wage rate	26.10
labor rates	0.57
total wage rate	41.08
hours per foreman	60.00
total labor cost (foreman)	2464.88
<b>SUBTOTAL MISCELLANEOUS EXPENSES</b>	\$15,278

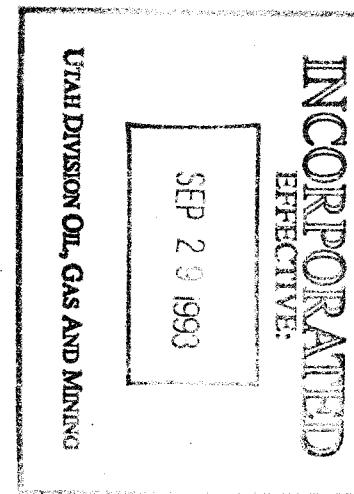
<b>TOTAL EARTH WROK COSTS</b>	\$93,321
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#### DRAINAGE CONTROLS

filter material unit cost (yd3)	30.00
quantity of filter material (tons)	600.00
total cost filter material	10260.00
riprap unit cost (ton)	18.55
quantity of riprap (ton)	2100.00
total riprap cost	38955.00
Total Unit Cost	49215.00

#### REVEGETATION COSTS

base cost	13385.00
overhead and profit	0.10
total cost	14723.50



**MONITORING COSTS**

base cost  
overhead and profit  
total cost

112500.00  
0.10  
123750.00

**INCORPORATED**  
EFFECTIVE:

SEP 29 1993

EXPLORATION DIVISION OIL, GAS AND MINING

**Addendum to Appendix 5-20,  
Bond Estimate (DOGM Determination)**

**Additional Projects incurred after the Bond Estimate**

<u>Project</u>	<u>Estimated Cost</u>	<u>Remarks</u>
Shotcrete of highwalls	\$20,604	Costs for this project have already been projected within the bond estimate and listed as item #23. Any further costs will be minimal and will be included within the contingency of the bond.

RECORDED  
IN APPENDIX  
5-20  
JUN 20 1994

added to the bond estimate, Appendix 5-20, 6/20/94